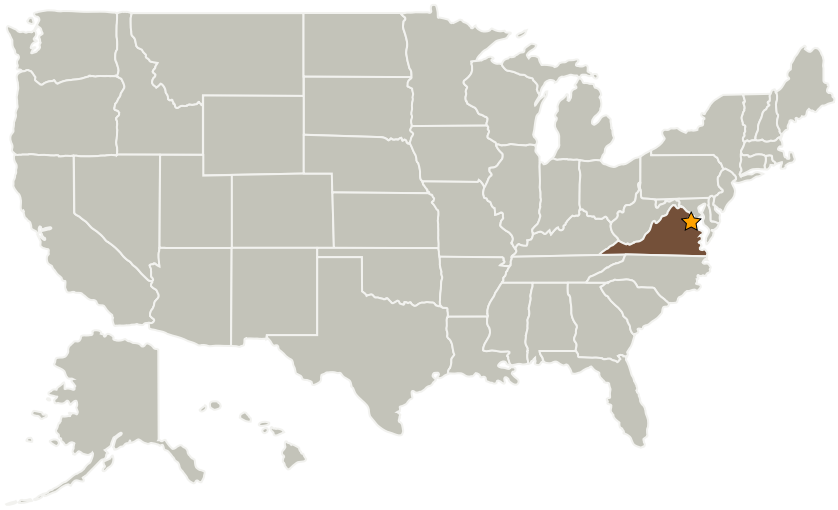
An Optimized Interferometer for HSRL Applications

Completed Technology Project (2012 - 2013)

Project Introduction

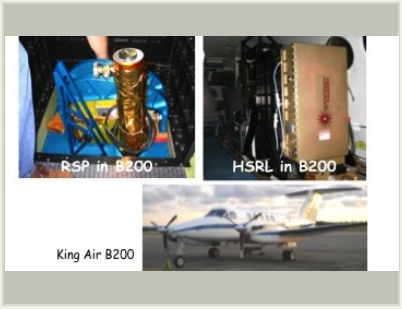
Develop interferometric High Spectral Resolution Lidar (HSRL) receiver component technology that will reduce mass, power, volume, risk, and cost for the Aerosols-Clouds-Ecosystems (ACE) Decadal Survey mission. This interferometer will be a significant advance over the current HSRL-2 interferometer:
More robust frequency locking (one degree of freedom vs. 3 in current design)
Higher long-term calibration stability (increased accuracy in science retrievals)
Allows simpler supporting detectors, electronics, and frequency locking architecture

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★NASA Headquarters(HQ)	Lead Organization	NASA Center	Washington, District of Columbia

Primary U.S. Work Locations
Virginia



Project Image An Optimized Interferometer for HSRL Applications

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Organizational Responsibility

Responsible Mission Directorate:

Science Mission Directorate (SMD)

Lead Center / Facility:

NASA Headquarters (HQ)

Responsible Program:

Earth Science

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Images

11846-1360261601991.jpg
Project Image An Optimized Interferometer for HSRL Applications
(https://techport.nasa.gov/image/1623)

Project Management

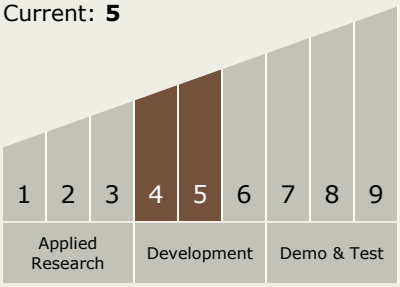
Program Director:
George J Komar

Project Manager:
Parminder S Ghuman

Principal Investigator:
Chris A Hostetler

Technology Maturity (TRL)

Start: **4**
Current: **5**



Technology Areas

Primary:

- TX11 Software, Modeling, Simulation, and Information Processing
  - TX11.6 Ground Computing
    - TX11.6.3 Exascale Supercomputer File System

Target Destination

Earth